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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/470,360 12/22/99 HORAN

K C-7197

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M SUSAN SPIERING
C/O CELANESE LTD
PO BOX 9077
CORPUS CHRISTI TX 78469-9077

EXAMINER

OH, T

ART UNIT

PAPER NUMBER

1623

DATE MAILED:

08/27/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/470,360

Applicant(s)
Horan et al

Examiner
Oh Taylor Victor

Art Unit
1623



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on May 30, 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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Final Rejection

The Status of Claims

Claims 1-5 have been rejected.

Claim Rejections-35 USC 103

1. Applicants' argument filed 5-30-01 have been fully considered but they are not persuasive.

Rejection of claims 1-5 under 35 U.S.C. 103(a) as being unpatentable over Papa et al (U.S. 5,231,222) in view of Spiske et al (U.S. 5,248,427).

The rejection of claims 1-5 under 35 U.S.C. 103(a) as being unpatentable over Papa et al (U.S. 5,231,222) in view of Spiske et al (U.S. 5,248,427) is maintained for the reasons of the record in paper no. 5.

Response to Argument

2. Applicants claim that there are some differences compared the references with the instant invention in the followings:

1. A distinction between Papa and the current invention is that the reaction stream in Papa is not dry and has several % of water content, thus forwarded to a

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distillation column before return to the reactor,

2. Papa does not disclose doing anything special to the organic phase to lead one of the skillful artisans in the art to process it through a membrane unit,

3. Spiske's process is directed to removal of water from a mixture of alcohols and/or carboxylic acids and/or esters by pervaporation or vapor permeation prepared by plasma polymerization, but the singular organic phase of Spiske is not flushed through the membrane,

4. None of the prior art references suggest placing just the organic phase through a membrane unit, and returning at least a portion of the organic phase to the reaction zone without first undergoing further distillation.

The applicants' view have been well taken, but these arguments are traversed.

First of all, concerning that the reaction stream in Papa being not dry with several % of water content before return to the reactor, the Examiner has noted applicants' argument.

However, Papa et al's reference does teach that the organic carboxylic acid enriched phase may be recycled to the reactor (see col. 9, lines 52-54). Therefore, from this passage, it becomes clear that the organic phase of Papa may be dried. Thus, it is relevant to the claimed invention.

Secondly, the failure of Spiske to disclose doing anything special to the organic phase to lead one of the skillful artisans in the art to process it through a membrane unit and the singular

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organic phase of Spiske is not flushed through the membrane unit, the Examiner has noted applicants' argument. However, the secondary Spiske et al reference does indicate the use of the membrane unit applicable to the removal of water from the carboxylic ester reaction products. Furthermore, Spiske does not mention that it is impossible for the singular organic phase of Spiske to be placed through the membrane unit. Therefore, if the person having an ordinary skill in the art had desired to remove any additional presence of water in the organic phase before return to the reactor, it would have been obvious for the skillful artisan in the art to have used Spiske's membrane unit in the Papa's process as an alternative to the distillation process.

Thirdly, with respect to the failure of the prior art references to suggest placing just the organic phase through a membrane unit, and returning at least a portion of the organic phase to the reaction zone without first undergoing further distillation, the Examiner has noted applicants' argument. However, Spiske does not mention that it is impossible for the singular organic phase of Spiske to be placed through the membrane unit. Therefore, if the person having an ordinary skill in the art had desired to remove any additional presence of water in the organic phase before return to the reactor, it would have been obvious for the skillful artisan in the art to have used Spiske's membrane unit in the Papa's process as an alternative to the distillation process. Thus, the prior art references are relevant to the claimed invention.

Therefore, all the rejections in the claims are maintained.

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Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

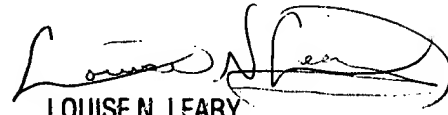
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. Victor Oh whose telephone number is (703) 305-0809. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Geist , can be reached on (703) 308-1701. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4556.

T. Victor Oh

TV
8/24/01


LOUISE N. LEARY
PRIMARY EXAMINER